



INDIVIDUALIZED ENGLISH LANGUAGE LEARNING FOR STUDENTS WITH DISABILITIES THROUGH ADAPTIVE EDUCATIONAL TECHNOLOGIES

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Abstract. *The integration of adaptive educational technologies into language education creates new opportunities for providing individualized learning experiences for students with disabilities. Traditional approaches to English language teaching may not always adequately address the diverse cognitive, sensory, communicative and learning needs of such students. The development of flexible and accessible learning environments is therefore becoming increasingly important, particularly in home-based education. This study explores the potential of adaptive educational technologies for individualizing English language learning for students with disabilities. Particular attention is given to the adaptation of learning materials, instructional pace, task complexity, communication formats and assessment strategies. The study argues that digital resources, multimedia tools, interactive exercises, speech technologies and applications based on artificial intelligence can facilitate differentiated instruction and increase students' engagement and autonomy. At the same time, technology should not be regarded as a substitute for pedagogical interaction. Its effectiveness depends largely on the teacher's ability to select and adapt technological tools according to the learner's individual educational needs. The findings suggest that a combination of individualized instruction and adaptive technologies can contribute to a more accessible, flexible and learner-centred approach to English language education.*

Keywords: *English language learning, students with disabilities, adaptive educational technologies, individualized learning, inclusive education, digital learning, home-based education, differentiated instruction.*

INTRODUCTION

Contemporary education increasingly emphasizes the principles of accessibility, inclusion and individualization. These principles are particularly important in teaching students with disabilities, whose educational needs may differ significantly from those of their peers. The framework of Universal Design for Learning formulates this requirement as the provision of multiple means of representation, action and expression, and engagement, so that variability among learners is anticipated at the stage of instructional design rather than compensated for afterwards (Rose & Meyer, 2002:71; Meyer, Rose & Gordon, 2014:5).



English language learning can present additional challenges because it requires the simultaneous development of listening, speaking, reading, writing, vocabulary and communicative skills. For students receiving home-based education, these challenges may be intensified by limited opportunities for face-to-face communication and interaction with peers. Consequently, teachers need flexible instructional approaches that allow educational content, learning pace, tasks and assessment methods to be adapted to individual learners (Tomlinson, 2014:18).

Adaptive educational technologies offer promising opportunities in this regard. Unlike conventional digital resources, adaptive technologies can support different learning pathways and provide learners with materials and activities that correspond to their abilities, progress and specific educational needs (Hall, Meyer & Rose, 2012:12). The purpose of this article is to examine how such technologies can be used to individualize English language instruction for students with disabilities, and to determine the conditions under which their use remains pedagogically justified (Westwood, 2013:3).

MAIN PART

Individualized learning involves adapting the educational process to the characteristics and needs of a particular learner. In English language education, individualization may concern several components of instruction, including the complexity of linguistic material, learning pace, amount of practice, type of feedback and mode of communication (Tomlinson, 2014:21). For students with disabilities, individualization may include simplified or adapted texts; visual support for vocabulary and grammar; audio versions of written materials; subtitles and transcripts; additional time for completing tasks; repetition of learning materials; alternative ways of demonstrating learning outcomes; and differentiated levels of task difficulty. Such adaptations can reduce unnecessary cognitive load and allow students to focus on the essential linguistic objectives (Hall, Meyer & Rose, 2012:4).

Adaptive educational technologies can be used to create more flexible learning environments. Multimedia resources, interactive platforms, speech-recognition tools, digital flashcards, online exercises and applications of artificial intelligence can provide multiple ways of presenting and practising language material. For example, when introducing new vocabulary, a teacher can combine a written word, an image, audio pronunciation and a contextual sentence. Such multimodal presentation can be



particularly useful for learners who experience difficulties with one specific mode of information processing, since the same content remains accessible through an alternative channel (Rose & Meyer, 2002:85; Meyer, Rose & Gordon, 2014:112).

Adaptive technologies can also support differentiated practice. Students who have already mastered a particular linguistic structure can proceed to more complex tasks, while those who require additional support can receive simpler exercises and repeated practice. This corresponds to the principle that differentiation should operate on content, process and product simultaneously rather than on the quantity of work alone (Tomlinson, 2014:38). An important advantage of digital technologies is immediate feedback. Learners can identify errors and repeat activities without experiencing the pressure that may accompany traditional classroom assessment.

Despite the increasing potential of educational technologies, the teacher remains a central element of the learning process. Technology cannot independently determine the most appropriate educational strategy for every learner (Westwood, 2013:9). The teacher should first identify the learner's strengths, difficulties, interests and educational needs. On the basis of this information, appropriate digital resources can be selected and adapted. For example, if a student experiences difficulties in listening comprehension, the teacher may provide shorter audio segments, slower speech, transcripts and repeated listening opportunities. If speaking is challenging, visual prompts, sentence models and structured dialogue activities can be introduced. Effective adaptive education therefore requires a combination of technological opportunities and professional pedagogical decision-making.

Adaptive technologies are particularly relevant to home-based English language education. Digital platforms allow teachers to maintain regular communication with learners and to provide individualized assignments outside the traditional classroom environment. A possible structure of an individualized online lesson may include a warm-up and motivation stage in the form of a short visual or conversational activity; the presentation of new material through adapted text, audio, images or video; guided practice consisting of exercises completed with teacher support; individual practice with tasks corresponding to the learner's level; a communication activity such as a short dialogue or oral response; and a final stage of feedback and reflection in which achievements and difficulties are identified. This structure allows the teacher to adjust the duration and



complexity of each stage according to the learner's individual capabilities (Westwood, 2013:52).

The use of adaptive educational technologies can contribute to several important outcomes in English language learning. First, it may increase accessibility by allowing educational materials to be presented in different formats. Second, individualized tasks can help learners progress at a comfortable pace. Third, interactive digital resources may increase motivation and engagement. Finally, adaptive assessment can provide teachers with information about individual progress rather than focusing exclusively on comparison between students (Hall, Meyer & Rose, 2012:97).

However, several challenges should also be considered. Not all students have equal access to appropriate digital devices or stable internet connections. In addition, excessive reliance on technology may reduce meaningful interpersonal communication. There are also issues related to digital accessibility, data privacy, the quality of content generated by artificial intelligence, and teachers' digital competence. Adaptive technologies should therefore be viewed as pedagogical instruments rather than independent solutions (Westwood, 2013:118).

CONCLUSION

Individualized English language learning through adaptive educational technologies provides significant opportunities for creating a more accessible and learner-centred educational environment for students with disabilities. By adapting the format, complexity, pace and assessment of learning activities, teachers can better respond to the diverse educational needs of individual learners (Tomlinson, 2014:21; Meyer, Rose & Gordon, 2014:112).

The effectiveness of adaptive technologies, however, depends not simply on their availability but on their pedagogically appropriate implementation (Westwood, 2013:118). A successful model should combine individualized instruction, accessible digital resources, continuous feedback and meaningful teacher-student interaction (Hall, Meyer & Rose, 2012:97). In the context of home-based education, adaptive technologies can therefore serve as an important means of expanding access to English language learning and of supporting the development of learners' linguistic competence, motivation and independence (Rose & Meyer, 2002:85).



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